

Claims

1. (Currently amended) A therapeutic agent carrier, comprising:
- a. a reversible gelling copolymer, having a linear random copolymer of:
    - i. an N-alkyl substituted [meth-]acrylamide derivative; and
    - ii. a hydrophilic comonomer, wherein an amount of said hydrophilic comonomer in the linear random copolymer is less than about 10 mole % and greater than or equal to about 1 mole % wherein gelation occurs upon heating and with substantially no syneresis, said linear random copolymer in the form of a plurality of linear chains having a plurality of molecular weights greater than or equal to a minimum gelling molecular weight cutoff, and excluding a substantial amount of copolymer chains or polymer chains having molecular weights less than the minimum gelling molecular weight cutoff;
  - b. an aqueous solvent mixed with said reversible gelling copolymer as a reversible gelling solution; and
  - c. a therapeutic agent mixed with said reversible gelling solution as said therapeutic agent carrier; wherein the therapeutic agent is not insulin or glucose.
2. (Original) The therapeutic agent carrier as recited in claim 1, wherein said amount is from about 1.6 mole % to about 2 mole %.
3. (Currently amended) The therapeutic agent carrier as recited in claim 1, wherein said N-alkyl substituted [meth-]acrylamide is selected from the group consisting of N-isopropyl [meth-]acrylamide, N,N-diethyl [meth-]acrylamide, N-[meth-]acryloylpyrrolidine, (N-ethyl[meth-]acrylamide) N-ethyl[meth-]acrylamide, and combinations thereof.
4. (Original) The therapeutic agent carrier as recited in claim 1, wherein said hydrophilic comonomer is hydrophilic [meth-]acryl- compound.
5. (Original) The therapeutic agent carrier as recited in claim 4, wherein said hydrophilic [meth-]acryl- compound is selected from the group consisting of carboxylic acid, [meth-]acrylamide, hydrophilic [meth-]acrylic acid ester, hydrophilic [meth-]acrylamide derivatives and combinations thereof.